WHAT IS CLAIMED IS:

1. A probe for generating an electromagnetic field, comprising:

a first conductor for receiving a first current signal;

a second conductor for receiving a second current signal;

a first radiation coil coupled to the first conductor for radiating a first electromagnetic field based on the first current signal; and

a second radiation coil coupled to the first conductor for radiating a second electromagnetic field based on the second current signal, the first and second electromagnetic fields causing an interferential electromagnetic field pattern.

2. The probe of claim 1, wherein the first conductor is a coaxial conductor.

3. The probe of claim 1, wherein the first conductor and the second conductor are nesting coaxial conductors.

4. The probe of claim 1, wherein the first radiation coil is coupled between the first conductor and ground, and the second radiation coil is coupled between the second conductor and ground.

5. The probe of claim 1, wherein the first radiation coil and the second radiation coil are in parallel planes.

6. The probe of claim 1, wherein the first radiation coil and the second radiation coil are in perpendicular planes.

7. The probe of claim 1, wherein the probe is less than 10 millimeters in diameter.

8. The probe of claim 1, wherein the first current signal has a first frequency, and the second current signal has a second frequency which is a substantially perfect multiple of the first frequency.

9. The probe of claim 1, wherein the first current signal and the second current signal are out of phase.

10. The probe of claim 1, wherein the first current signal and the second current signal are in phase.

11. The probe of claim 1, wherein the first current signal comprises an interferential current signal of at least two currents.

12. A method for generating an electromagnetic field, comprising:

receiving a first current signal;

receiving a second current signal;

radiating a first electromagnetic field based on the first current signal; and

radiating a second electromagnetic field based on the second current signal, the first and second electromagnetic fields causing an interferential electromagnetic field pattern.

13. The method of claim 12, wherein the first current signal has a first frequency, and the second current signal has a second frequency which is a substantially perfect multiple of the first frequency.

14. The method of claim 12, wherein the first current signal and the second current signal are out of phase.

15. The method of claim 12, wherein the first current signal and the second current signal are in phase.

16. The method of claim 12, wherein the first current signal comprises an interferential current signal of at least two currents.

17. A system for generating an electromagnetic field, comprising:

means for receiving a first current signal;

means for receiving a second current signal;

means for radiating a first electromagnetic field based on the first current signal; and

means for radiating a second electromagnetic field based on the second current signal, the first and second electromagnetic fields causing an interferential electromagnetic field pattern.

18. A probe for generating an electromagnetic field, comprising:

a conduction member for conducting at least two current signals; and

a radiation tip coupled to the conduction member for radiating an electromagnetic field based on the at least two current signals.

19. The probe of claim 18, wherein the conduction member includes six nesting coaxial conductors, each for conducting a current signal.

20. The probe of claim 19, wherein the radiation tip includes six radiation coils, each radiation coil has one end coupled to a respective one of the six coaxial conductors and the other end coupled to ground.

21. The probe of claim 20, wherein the conduction member includes a seventh nesting coaxial conductor that is coupled to ground and to the grounded end of each radiation coil.

22. The probe of claim 21, wherein the six radiation coils are positioned in different planes.

23. The probe of claim 21, wherein the six radiation coils are positioned substantially in the planes of a cube.

24. The probe of claim 19, wherein isolating material is placed between several of the nesting coaxial conductors.

25. The probe of claim 19, wherein a coolant circulates between two adjacent nesting conductors.

26. The probe of claim 25, wherein the two adjacent nesting conductors include the two outermost conductors.

27. The probe of claim 19, wherein a coolant circulates within one of the conductors.

28. The probe of claim 18, wherein the at least two current signals are conducted on a single conductor as an interferential current signal, and the radiation tip includes one radiation coil coupled to this single conductor.

29. The probe of claim 18, wherein the at least two current signals are conducted on different conductors.

30. A method for generating an electromagnetic field, comprising:
conducting at least two current signals; and
radiating an electromagnetic field based on the at least two current signals.

31. The method of claim 30, wherein the at least two current signals are conducted on a single conductor as an interferential current signal, and the electromagnetic field is radiated from one radiation coil coupled to this single conductor.

32. The method of claim 30, wherein the at least two current signals are conducted on different conductors.

33. A system for generating an electromagnetic field, comprising:
means for conducting at least two current signals; and

means for radiating an electromagnetic field based on the at least two current signals.

34. A radiation tip for generating an electromagnetic field pattern to ablate tissue, comprising:

a first radiation coil for radiating a first electromagnetic field based on a first current signal; and

a second radiation coil for radiating a second electromagnetic field based on a second current signal, the first electromagnetic field and the second electromagnetic field causing an interferential electromagnetic field pattern for ablating tissue.

35. The probe of claim 34, wherein the first radiation coil and the second radiation coil are in parallel planes.

36. The probe of claim 34, wherein the first radiation coil and the second radiation coil are in perpendicular planes.

37. The probe of claim 34, wherein the radiation tip is less than 10 millimeters in diameter.

38. The probe of claim 34, wherein the first current signal has a first frequency, and the second current signal has a second frequency which is a substantially perfect multiple of the first frequency.

39. The probe of claim 34, wherein the first current signal and the second current signal are out of phase.

40. The probe of claim 34, wherein the first current signal and the second current signal are in phase.

41. The probe of claim 34, wherein the first current signal comprises an interferential current signal of at least two currents.

42. A method for generating an electromagnetic field pattern to ablate tissue, comprising:

radiating a first electromagnetic field based on a first current signal; and

radiating a second electromagnetic field based on a second current signal, the first electromagnetic field and the second electromagnetic field causing an interferential electromagnetic field pattern for ablating tissue.

43. The method of claim 42, wherein the first current signal has a first frequency, and the second current signal has a second frequency which is a substantially perfect multiple of the first frequency.

44. The method of claim 42, wherein the first current signal and the second current signal are out of phase.

45. The method of claim 42, wherein the first current signal and the second current signal are in phase.

46. The method of claim 42, wherein the first current signal comprises an interferential current signal of at least two currents.

47. A system for generating an electromagnetic field pattern to ablate tissue, comprising:

means for radiating a first electromagnetic field based on a first current signal; and

means for radiating a second electromagnetic field based on a second current signal, the first electromagnetic field and the second electromagnetic field causing an interferential electromagnetic field pattern for ablating tissue.